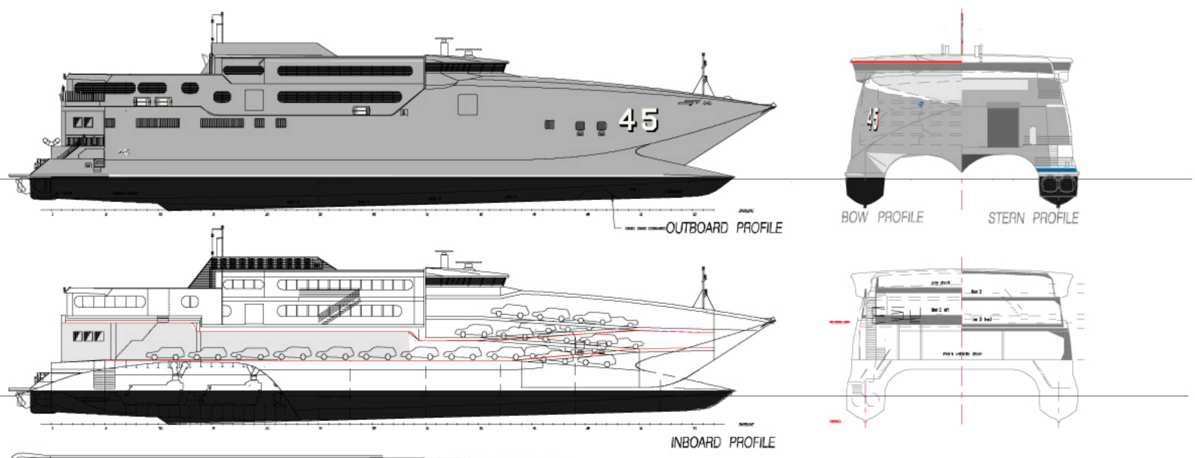
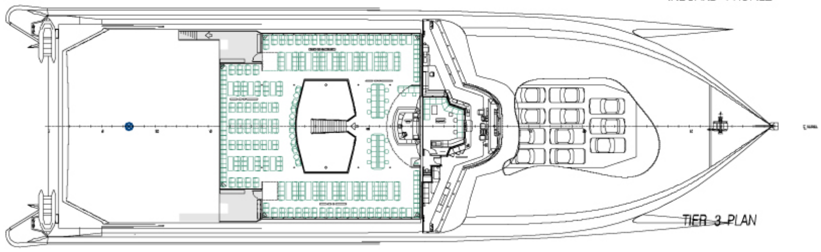




PRINCIPLE PARTICULARS

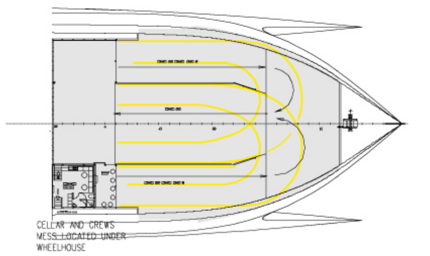
LENGTH OVERALL (excluding fenders)	86.27m
WATERLINE LENGTH	76.71m
BEAM OVERALL (moulded)	26.00m
HULL BEAM (moulded)	4.33m
HULL LENGTH OVERALL	81.34m
HULL C.L. TO VESSEL C.L.	10.83m

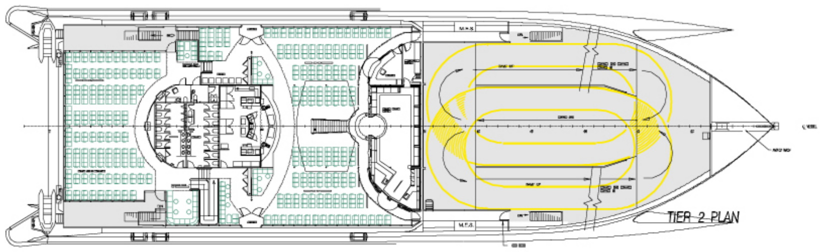
VEHICLE /FREIGHT SPACES

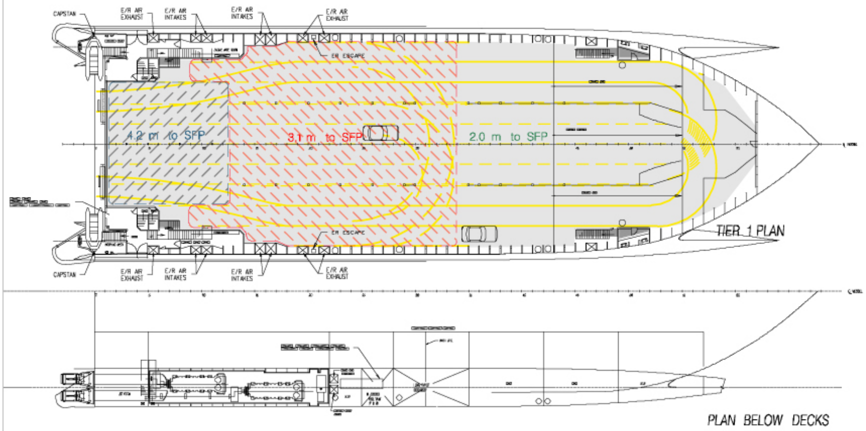
TIER 1 = approx. 75 cars (4.5 x 2.3m)
16 small trucks (6.5m.L x 2.5m.W x 2.85m.H
4 buses
RAMP B & C = approx. 50 cars (4.5m x 2.5m)
RAMP D = approx. 18 cars (4.3m x 2.25m)
TOTAL = max. 143 cars & approx. 16 small trucks & 4 buses
(subject to combined gross vehicle masses)

PASSENGERS /CREW

TIER 2 PASSENGERS	=	526 persons
TIER 3 PASSENGER	=	340 persons
CAPTAINS LOUNGE	=	12 persons
CREW MEMBERS	=	22 persons
TOTAL	=	900 persons (including 22 crew)







E	[illegible]	J.G	DUTY FREE SHOP/RECEPTION/TRANSFER RM DETAILS UPDATED
D	[illegible]	[illegible]	LIFERAFTS REPOSITIONED
C	[illegible]	J.G	TIER 2 AND 3 PASSENGER SEATS UPDATED TO 900 PASSENGERS INC CREW
B	[illegible]	[illegible]	UPDATED SEATING ARRANGT. ATRIUM, SHOPS, CAPTS LOUNGE, DELETE STORE
A	[illegible]	[illegible]	UPDATED TO STANDARD ARRANGEMENT

YARD NO. 045

TITLE
86M WAVE PIERCING CATAMARAN FERRY
STANDARD GENERAL ARRANGEMENT

DRAWN BY: GLDOYLE	SCALE: 1:175
CHECKED BY	DATE: 02 AUGUST 96
DRG. No.: 045-09-32-001	REV: E

incat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NAVY SPEED Machine

The Royal Australian Navy has deployed the latest addition to its existing fleet in Darwin, the spectacular wave-piercing catamaran, HMAS Jervis Bay, leased from Tasmanian manufacturer, INCAT. Dennis Schulz reports.

The sight of it cruising through Darwin Harbour stops onlookers dead in their tracks. With the appearance of a floating spaceship, the enormous and highly aerodynamic HMAS Jervis Bay is like nothing ever seen before in northern waters.

The new Navy vessel's statistics tell the story. INCAT 45 is 86.6 metres long and its four 10,000 horse power engines can attain top speeds of 47 knots, spraying a geyser-like cloud of seawater in its wake. It can move up to 867 passengers or, in military terms, 500 armed troops in full kit, nearly twice as fast as a patrol boat.

To illustrate its speed capacity, commanding officer of one of the vessel's two crews, Lieutenant Commander Vaughn Rixon explains that the big cat has just done a run out to Ashmore Reef and brought back 44 illegal immigrants and some foreign crew.

"We processed them on board on the way back," he said. "The patrol boats were allocated to other tasks at the time and it would have taken both of them two or three trips from Ashmore to bring all of those people back to Darwin. Jervis Bay did it in just one hit."

But it was at a cost. The Jervis Bay is expensive to run with its engines drinking up to 7000 litres of fuel an hour at top speed.

INCAT 45, the two year old vessel that was re-christened HMAS Jervis Bay, is designed as a fast commercial ferry, not a military vessel. The Navy leased it from Robert Clifford's Hobart INCAT operation which is recognised as a world leader in fast catamaran technology.

In June, it was sailed to Darwin to fill the gap left when the Navy's two amphibious support vessels were sent to Newcastle for refitting. On the way to Darwin, the vessel smashed the existing Great Barrier reef transit record of 36 Knots by maintaining an average speed of 42.

"We came up on prawn trawlers doing 45 Knots and we'd be on top of them so quickly that they thought their radar was playing up," INCAT Technical Support Specialist Michael Hutt said. INCAT has sent Hutt to assist the Navy with maintenance and training during the lease period.

DENNIS SCHULZ

Hobart's INCAT operation are recognised as a world leader in fast catamaran technology.

Two crews of 20 each had to be trained for the operation of Jervis Bay, the twin crews required for a fast turn-around of personnel. They had to be specially schooled in high speed safety and navigation procedures. They required courses in moving large numbers of people through evacuation procedures, specialty training they could only get at the Australian Maritime College in Launceston.

Over the two year lease period,

DENNIS SCHULZ

costing $32 million including support and training, Jervis Bay will be assessed for its military suitability.

"We have to remind ourselves that this is a commercial vessel,"

"We have to remind ourselves that this is a commercial vessel," Australian Maritime Commander Rear Admiral John Lord says. "It wasn't designed for amphibious operations. It was designed for short, sharp passages from A to B and turn around from B to A, carrying people and vehicles to purpose built facilities. So we have a lot of experimenting to do to find out, if we bought one, how would we change it to suit our method of operation."

Australian Maritime Commander Rear Admiral John Lord

The Navy will now have two years to decide whether it needs such a craft as a permanent fixture and if so, what changes should be made if one is specially built. Will it need guns? What modifications would it need to ferry personnel back and forth between ships at sea? Would it need galleys and showers to accommodate lots of people on long hauls? Should it be larger and faster? The answers to these questions are already eagerly awaited by Australia's number one military ally.

"The Americans are very interested in getting something that will go 65 Knots at great distances and they are very interested in what Bob Clifford and INCAT are doing," Lieutenant Commander Rixon says. "They're hanging out for us to give them information on how it works for us."

WORLD REPORT

Condor Vitesse

Australia

A very sun burnt Mick Hutt, from Incat's After Sales Technical Support team reported that *HMAS Jervis Bay (045)* has played a significant part in the deployment of troops and equipment to East Timor over recent months.

HMAS Jervis Bay is currently undertaking three return trips per week from Darwin to Timor and with an average service speed of 40 knots, each crossing is completed in under 11 hours.

An interesting innovation recently was the construction of a port aft lifting frame to enable the self-deployment of the 3.6 tonne ramp from the ship. The system, primarily designed for ports with little or no existing infrastructure has worked well in reducing turnaround times. The lifting frame also facilitates the deployment and recovery of large inflatable ribs.

Aside from troops and their personal equipment, the payloads consist primarily of palleted stores, frozen and chilled products and various types of military vehicles. The frozen and chilled products are transported in recently installed refrigerated containers.

Mick is adamant the reliability of *HMAS Jervis Bay* has been "exceptional" and that the ship "is still generating a lot of positive publicity, particularly in regard to speed and turnaround".

045 crew greet *Condor Vitesse* refuelling in Darwin on the New Zealand route

045 HMAS Jervis Bay

Crew of HMAS JERVIS BAY working alongside 3 RAR (Army) unloading in Dili. Pic: ABPH Phillip Hunt

Navy's Newest Vessel Makes Her Active Service Debut *by Ableseaman Phillip Hunt*

On Monday 20th September I joined *HMAS Jervis Bay*, it was the first time she was to fulfil her intended role in the Royal Australian Navy and take troops and supplies into the East Timorese port of Dili.

Within hours of my joining the first of the 572 soldiers from 3RAR Alpha and Charlie Company and 108 Field Battalion marched along the wharf to enter via the huge rear doors. They marched through the massive car deck depositing their packs and gear in neat orderly areas and were then lead up to the passenger decks to take their seats. This process had been well rehearsed by the ship's small crew (26 total) and ran smoothly even being completed under the allotted time frame. When all were aboard and the last of the supplies loaded, a safety brief was given by the ship's manager Petty Officer Bosun Fisher. Port Captain LCDR John Dudley gave the orders to cast off and he gently steered her away from Stokes Hill Wharf and out of Darwin Harbour. It wasn't long before her four massive engines were fully primed and the huge catamaran was nonchalantly doing more than 40 knots.

In less than twelve hours she would arrive in Dili, I took this time to speak to both her Commanding Officer and the Commander of 3RAR LTCOL Nick Welch, both were pleased with the mission so far and the ease with which the Navy and Army had worked together to move so many troops and supplies. It was the first time 3RAR had been deployed overseas on active duty since the Vietnam War and even though they were usually an airborne unit their switch to an amphibious group was no problem at all. The soldiers had trained and prepared for this mission and all were keen to show the skill and professionalism of their regiment on peacekeeping duty.

At first light we approached Dili Harbour and were met by a flotilla of International vessels all part of the international peacekeeping force now known as INTERFET (International Forces East Timor). The operation was less than a day old and though *Jervis Bay* was prepared for many options the forces already on the ground had secured the port and we were able to come alongside to the cheers of thousands of refugees who had lined the wharf. Once secure the men and machinery began the immense task of unloading and assembling into a warehouse at the port to begin their role in this massive operation. The leader of INTERFET, Major General Peter Cosgrove, was there to meet the regiment on the wharf and welcomed them to his command.

Once again with ease and professionalism the unload went smoothly under the allotted time frame and *Jervis Bay* having completed its first run cast off from the wharf for its return run to Darwin to do it all again. Bravo Zulu to all involved.

HMAS JERVIS BAY First Warship to Transport East Timorese

by LEUT Emma Williams, RAN

At 8pm on Tuesday 11th November 1999 thirty trucks arrived on the wharf in Dili harbour with a human cargo of 549 East Timorese bound for Suai. These Internally Displaced People (IDPS) had arrived in Dili via barge from Atapupu and Atambua in West Timor. Some had only arrived in Dili the day before; others had arrived a fortnight ago.

Waiting from them on the wharf was the Royal Australian Navy's fast lift catamaran *HMAS Jervis Bay*. Due to the build up of IDPS returning to Dili, the INTERFET Naval Component Commander, Commodore Jim Stapleton agreed to assist in their relocation by providing *HMAS Jervis Bay* as their transport.

"This is the first time that the transportation of IDPS has been provided by a naval warship. It is also the first time IDPS have been moved to another location outside of Dili," he said.

Up until now all IDPS, under the responsibility of INTERFET's Combined Movement Co-ordination Centre (CMOC) have been transported from camps in West Timor to Dili by merchant vessels, civilian ferries and aircraft.

"The Royal Australian Navy is extremely pleased to be able to provide a suitable vessel for the transport of the East Timorese back to their homes," said Commodore Jim Stapleton.

As the trucks were unloaded on the wharf, each persons belongings were stowed in the ships hull, and one by one the East Timorese were escorted onboard to fill one of *HMAS Jervis Bay*'s 800 seats.

With the IDPS consisting of 10% men, 30% women and 60% children, the Ships Company endeavoured to provide some entertainment for the children by playing Mr Bean and The Simpsons on the ships video system.

In addition to the 549 East Timorese onboard, *HMAS Jervis Bay* embarked 50 coordinating personnel from a variety of non-government and defence agencies including humanitarian aid workers, HQ INTERFET staff, medical practitioners, interpreters and baggage handlers.

With the normal complement of twenty Ships Company, *HMAS Jervis Bay* departed Dili Harbour with one of her largest loads yet - 620 passengers.

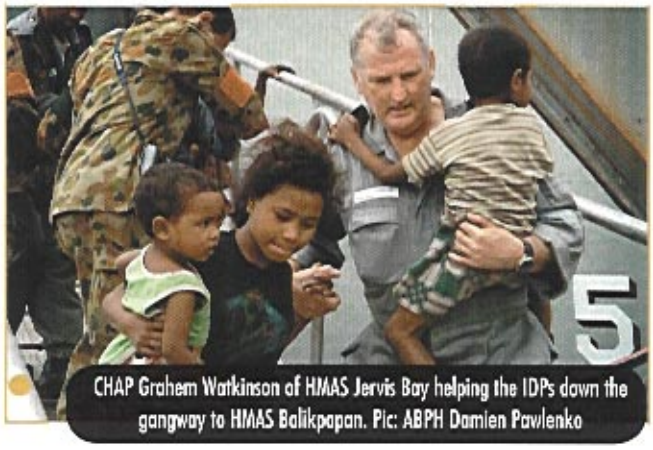
Despite encountering a severe thunderstorm during the night, the ship arrived off Suai beach at 10 am on Wednesday 11 November. However the most difficult and testing part of the operation was only just about to commence.

With no wharf facilities at Suai, the Royal Australian Navy landing craft *HMAS Balikpapan* was required to raft with *HMAS Jervis Bay* in order to transfer the IDPS and transport them to the beach.

Despite the fact that neither ship had conducted this type of evolution *HMAS Jervis Bay* took the lead and berthed with her stern against *HMAS Balikpapan*'s bow. *HMAS Balikpapan* had already lowered her bow door to allow a gangway to be passed from *HMAS Jervis Bay* starboard side.

With the gangway successful lowered onto the Landing Crafts bow door, all baggage and personal effects of the East Timorese were loaded onto *HMAS Balikpapan*'s vehicle deck followed by the first 200 passengers.

The operation was indeed a moving occasion for everyone onboard with many personnel pitching in to help carry the old and frail, young and shy, or sick and injured across the steep gangway.



CHAP Graham Watkinson of HMAS Jervis Bay helping the IDPs down the gangway to HMAS Balikpapan. Pic: ABPH Damien Pawlenko

Once loaded *HMAS Balikpapan* drove away for *HMAS Jervis Bay* and headed inshore to where humanitarian aid agencies awaited alongside the relatives of the returning IDPS.

With the successful delivery of *HMAS Balikpapan*'s first load of cargo and people to the shores of Suai, she returned to collect the final 249 passengers to safely transport them ashore. By 2.30 p.m. on Wednesday 11 November the first transportation of East Timorese IDPS by a Royal Australian Navy warship was complete.

In only 4 hours the Royal Australian Navy had managed to deliver 549 IDPS to Suai and offload them in only two transfers by naval landing craft. The only delay in the proceedings being the observation of a minutes silence by the ADF personnel onboard both *HMAS Jervis Bay* and *HMAS Balikpapan* for Remembrance Day.

With the operation complete, and all 549 IDPS safely transferred ashore, both *HMAS Jervis Bay* and *HMAS Balikpapan* departed Suai for Darwin.

Such a success was the operation that the Royal Australian Navy may consider the use of *HMAS Jervis Bay* for the transport of IDPS to other locations throughout East Timor.

conjunction with the new Ninox night vision goggles and the Night Weapon Sight to allow high speed reflex shooting in low to very low light conditions.

the problems in the issue F-88.

A further Steyr variant, the F-88T, will also enter service shortly. Rebuilt in .22 rimfire, the F-88T is intended for training areas where the

While quantities of M-4s purchased have not been released, *A&NZD* has heard that 2000 of the new weapons have been acquired.

of the Steyr.

JERVIS BAY OPERATIONAL IN NORTH

DARWIN: The RAN's new fast troop transport *HMAS Jervis Bay* successfully completed her first operational mission in early August when the catamaran was deployed to remote Ashmore Reef 640 Nmiles west of Darwin to pick up illegal immigrants and transfer them back to Australia for detention.

Jervis Bay completed the deployment to Ashmore Reef in 13 hours, leaving Darwin at 1930 hrs on August 1 and reaching the tiny coral cay at 0830 the following morning.

Jervis Bay picked up 44 suspected illegal immigrants and four Indonesians who had been stranded on Ashmore by an Indonesian fishing boat and transferred them to Darwin where they were taken into custody.

An Interview with the Commanding Officer HMAS JERVIS BAY LCDR Vaughn Rixon RAN

By Ross Gillett, Defence Public Affairs, Sydney

Question:

In mid 1999 the RAN began the lease of an INCAT 45 catamaran ferry from INCAT Tasmania. What are the roles of the converted ship and how successful has the craft been in her first months in service?

Answer:

The charter has been quite successful with both crews achieving MLOC during the transit from Hobart to Darwin. A number of necessary routines have been established and proven including firefighting, passenger handling, loading operations and crew rotation.

Q:

What changes were made to JERVIS BAY to oufit her for the new naval/army role?

A:

The most obvious change is the new paint scheme but the most important changes are the inclusion of two 50 tonne fuel tanks to increase the operational range and the strengthening to the vehicle deck to broaden the range and number of vehicles able to be carried.

Importantly, there was no sleeping accommodation installed so the ship remains limited to operating for relatively short sorties out of ports with adequate accommodation and facilities for the crew.

Q:

Can you highlight the tasks performed by JERVIS BAY from her homeport of Darwin in the Northern Territory?

A:

JERVIS BAY is standing by as one of the mobility options for 1 BDE. Until called for, however, JERVIS BAY has been undertaking trials and crew training in the Northern Australian Exercise Areas. Other roles have included VIP and Sea Training Group transfers to participants in Exercise KAKADU FOUR 1999 and the recovery of 45 suspected unlawful non-citizens from Ashmore Reef.

Q:

What are the various capacities/loads, able to be carried by the ship?

A:

In her civilian guise, INCAT 45 carried 867 passengers and their vehicles up to a deadweight load of 405 tonnes. JERVIS BAY is now capable of carrying a full load (415 tonnes of vehicles, passengers and fuel) over 1000nm. The load is a balance of range versus cargo - the more fuel required the less cargo that can be carried. The ship has a proven ability to carry all classes of Landrover, UNIMOG, ASLAV and unladen Mack trucks. Current deck testing should also allow M113 APC to be carried.

The principle concept of operations for JERVIS BAY includes 500 troops in the equation which accounts for 75 tonnes in the load.

Q:

Is the two crew system working well? Is there anything else unusual in the way the staff are employed onboard, in particular the five person Army detachment?

A:

The two crews are well integrated and are not operating in the "normal" two crew system (one crew for an extended period of time while the other crew is employed elsewhere). Although the two crews are independent when operating at sea, the full skill set required for overall management and support of the ship's company is shared across the two crews. For example there is only one coxswain, one chef, one naval stores rating and so on.

One of the greatest shifts for many people onboard was the need to undertake duties outside their normal professional category. Once underway for example, the executive department is almost exclusively employed as cabin staff - looking after the well being and comfort of the passengers. The Officer of the Watch is in direct control of the ship - no helmsman or

quartermaster, and the Engineering Officer of the Watch is on the bridge assisting as a lookout in between monitoring the remote sensors in the unmanned engineering spaces and vehicle deck. The five person army detachment in each crew consists of one sergeant (Loadmaster), two corporals and two privates. Their duties include assisting the Executive Officer in developing the load plan, the mustering and call forward of embarking troops and vehicles, securing off the vehicle deck and once underway duties as cabin staff.

Q:

Will JERVIS BAY be fitted out with small weapons, possibly for a patrol boat role?

A:

No. JERVIS BAY carries a navigation outfit of pyrotechnics and a bridge rifle for emergency use.

Q:

Are any other modifications being planned to enable the vessel to undertake other tasks or improve its capabilities?

A:

No. There are some minor changes to improve fendering arrangements and trials to realise the full potential of the deck strengthening but nothing that will change the lift capability of the ship.

MEDIA RELEASE

Senator the Hon. Eric Abetz

Parliamentary Secretary to the Minister for Defence
Liberal Senator for Tasmania

EMBARGOED
Strictly not for release until 11:30am - 25.04.99

25 April 1999
PARLSEC 117/99

DEFENCE BOOST TO INCAT COULD BE JUST THE BEGINNING

Contract negotiations for the two year charter of an Incat catamaran to Defence was announced by Parliamentary Secretary to the Minister for Defence and Tasmanian Liberal Senator Eric Abetz today.

Senator Abetz said, "This is great news for Tasmania, for the workers of Incat, and of course, Incat itself, especially in the context of the further flow on potential.

"This contract whilst a significant boost to Tasmania on its own has the potential for delivering more benefits in the future. This two year charter will provide Defence with the opportunity to trial and evaluate high speed multi-hull technology for a range of mobility applications.

"The eyes of the world will also be watching, and if successful (as it is anticipated), the results of the trial could open up the vast and lucrative international defence contracts for Incat," Senator Abetz said.

"The training of the two crews will be conducted by our Australian Maritime College in Launceston. This is thinking smart for Tasmania, for Defence and for export potential," Senator Abetz said.

Senator Abetz said whilst some call for superficial assistance for Tasmania, I have always taken the view that Tasmania needs to stand on it own two feet. Tasmania's representatives have to identify the positives of our State and its people and promote them.

"This Defence contract with Incat is a case in point. Tasmania won because it was the best and could deliver," Senator Abetz said.

The Charter has been awarded to Incat as the only builder with a vessel available within Defence's required timeframe.

The vessel will be commissioned into naval service and operated from Darwin with two crews of about 20 Navy and Army personnel.

The high speed catamaran will complement our capability to move troop and equipment relatively quickly and will support the increased levels of preparedness recently announced by the Government.

The vessel might also assist other Government agencies to provide support to disaster relief operations within Australia and our region, or evacuations. When not in use for these operations, it will participate in a range of Australian Defence Force exercises including Crocodile 99.

Contact: Senator Eric Abetz 0418 136 208 or Jane Wagner 0407 100 521

MEDIA RELEASE

The Hon. John Moore, MP
Minister for Defence

Sunday, 25 April 1999

EMBARGOED UNTIL 11:30AM SUNDAY 25 APRIL

MIN118/99

Defence Capability Boosted by new High Speed Catamaran

The Minister for Defence, John Moore, today announced that Australia's Defence Force capability will be boosted by the introduction of a locally built, high speed catamaran to provide additional sea transport support for ADF activities in northern Australia.

"This kind of vessel has significant advantages in terms of its capabilities and flexibility," Mr Moore said. "With a top speed of around 40 knots, the catamaran can carry up to 500 fully equipped troops plus stores and vehicles.

"The introduction of a high speed catamaran will complement Australia's ability to move troops and equipment in the most effective manner and will support the increased levels of preparedness recently announced by the Federal Government."

The new vessel will participate in a range of ADF exercises including 'Crocodile 99' later this year. There is also scope to use it in the provision of support for disaster relief operations within Australia.

The Department of Defence has commenced negotiations with International Catamarans (INCAT), the builder and supplier of the vessel, to charter the catamaran for a two year period.

It will be based in Darwin from the end of June this year and commissioned into Naval service, with two crews of 20 Navy and Army personnel. Training of the crews will be conducted at the Australian Maritime College, Launceston. Additional, onboard training will take place under the supervision of an experienced check captain.

"This charter represents a further investment by Defence in Australian industry and technology," said Mr Moore. "It increases the operational effectiveness of the ADF and boosts linkages between the Defence Force and local industry."

"It also provides the ADF with an opportunity to trial and evaluate high speed, multi-hull technology for a range of military applications, in a realistic operating environment."

The United States Navy and Royal Navy are also considering the multi-hull concept for sea transport operations and have expressed interest in Australian catamaran designs.

"Australia is internationally renowned for advances in the development of this type of vessel which offers an innovative solution to current Defence requirements," Mr Moore said.

Chris Wordsworth — Media Adviser — 02 62777800 0419 982482 Fax: 02 62734118
Email: word@defence.gov.au Web: www.defence.gov.au

Defence comes clean on the LPA stuff-up

CANBERRA – After a long silence, Defence Minister John Moore has finally slammed the Navy's amphibious transport (LPA) project, which clearly had been off the rails for years.

He released one report by the Inspector-General of Defence and a second by Navy. They reveal an incredible story of make-do, stuff-ups and decision-making on the fly which turned a $35 million project into a likely $400 million disaster. (Read both reports on the Defence home page site).

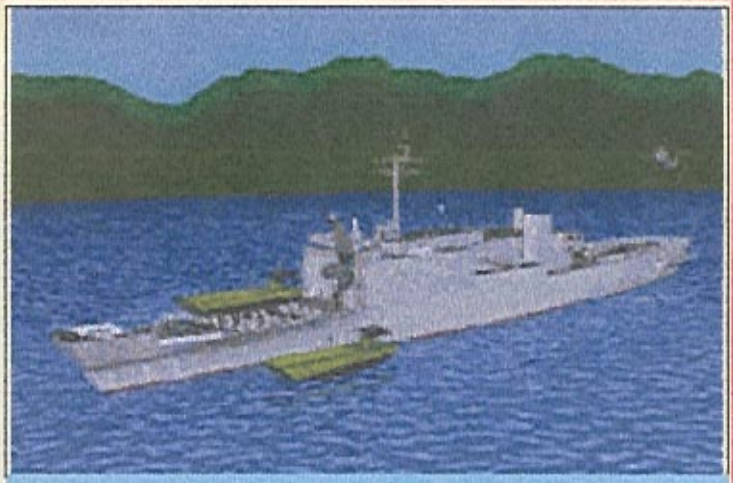
The two ships, *HMAS Manoora* and *HMAS Kanimbla*, bought in 1994, are still not in service, although *Manoora* is finally in the Navy's hands but not in service.

In the interim, we have had the Bougainville peacekeeping support effort, the *Westralia* disaster and the East Timor mission. The ships would have been invaluable in any of these contingencies.

As a consequence, Navy has had to charter *HMAS Jervis Bay*, the fast ferry (which may turn out to have been one of the best things it ever did). The money that should have gone into other vital ship and systems maintenance has been chucked into the LPA black hole.

You don't have to be a wizard to work out that after this debacle, the purchase of the US *Kidd* destroyers has n't got a chance.

The story begins in December 1992 when the ADF established a project to build in Australia a Defence training and helicopter support ship (THSS), to replace the original *Jervis Bay*. The budget the following year killed the project.



RAN artist's impression

Dream on: Night operations with HMAS Manoora – *as an artist's imagination depicts her.*

Navy instead began to look for second-hand ships in the US. It identified the Newport-class tank-landing ships (LSTs) and selected two, *USS Saginaw* and *USS Fairfax County*, as the best buys. Both ships were still in USN service. The RAN inspected them. Despite the fact they were built in 1971 with 1950s and 1960s machinery and design, the RAN recommended their purchase for about $70 million.

When they were delivered into the RAN (as *Manoora* and *Kanimbla* respectively), ADI finally checked them out properly, discovered corrosion and machinery problems much worse than the initial inspection had shown and estimated repairs would cost $31.2 million.

Kanimbla was put into service for eight months on tasks around the region. This revealed a whole lot of new problems such as habitability and systems, which were added to the task list. They were delivered to Forgacs Dockyard in Newcastle in 1996 on a $55 million contract where a whole raft of new requirements were discovered or invented (such as a hospital, handling equipment for cargoes, helicopter landing facilities) and even more problems were discovered that kept adding to the price.

The bills are still coming in but the I-G estimates the project, which had an initial cost of $120 million, "could amount to over $400 million".

All this for a life-of-type of only 15 years – and continuing support difficulties that could include having to get spares manufactured especially for obsolescent engines and machinery.

BAES teams for *Collins* combat

SYDNEY – BAE SYSTEMS will team with Sonartech Atlas for the *Collins* class submarine combat system replacement and also the heavyweight torpedo replacement program.

For the replacement program, Sonartech Atlas is offering its ISUS 90, which offers open systems design and evolution concepts.

For the heavyweight torpedo replacement, Sonartech Atlas is offering the DM2-A4 torpedo.

BAE SYSTEMS Australia will support manufacturing and integrated logistic support activities for each of these programs